1: Metraux E-5 (1934-1935) 1940
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137 1880 and 1890). The last one on the island grew near Vai-mata but died recently "because there were no more kings." From the distribution of the sandalwood, it seems likely that the *naunau* was the true sandalwood and not the bastard. Sandalwood is found on the atolls of Elizabeth and Ducie, the nearest islands to Easter Island.

UNIDENTIFIED TREES

De la Maza (208, vol. 1, p. 7) mentions an unknown tree about which he writes: "The *tumahiti* wood is rather hard and more or less pliable. The Kanakas use it to make yokes and ploughs. It is the only tree which grows freely in the island. Its fruit is oval in shape, yellowish, about half an inch in length and it tastes rather bitter."

It is likely that De la Maza has misspelled the name of the *miro-tahiti* (*Melia azedarach*), the wood generally used by the natives for wooden images and implements.

ANIMAL LIFE

136 973 Before man settled on Easter Island, animal life in its highest form was represented by flocks of sea birds, which nested on the three islets off the southwestern promontory—Motu-kaukau (Needle Rock), Motu-iti, and Motu-nui. Some birds have made their abode in the interior of Rano-kao, but a few of them are seen flying along the shores of the island itself. The native legends explain this concentration of the birds at a single point as a protective measure adopted by the god Makemake to prevent the extermination of birds by egg hunters.

136 The importance of sea birds in native mythology and art makes necessary a brief enumeration of the species identified by our Expedition. On Motu-nui, we collected petrels (*taiho, Pterodroma heraldica paschae*), gray terns (*tuvituvi, Procelsterna caerulea skottsbergi*), white terns (*kia-kia, Leucanous albus royanus*), noddy terns (*tuao, Anous stolidus unicolor*), gray-backed terns (*manutara, Sterna lunata*), boobies (*kena, Sula dactylatra* subsp. ?), tropic birds (*tavake, Phaeton* sp.), and *makohe* (*Fregata minor* subsp. ?). A specimen of *Oestrelata incerta* or *leucoptera* was designated under the name of *kumara* and a *Sula Cyanops* as *ruru*. A list of Easter Island birds published by Knoche (123, pp. 141-144) contains the word *nguingui* for the *Gygis alba* (syn. *Leucanous albus royanus*) and *rengurengu* for the *Anous caeruleus* (syn. *Anous stolidus unicolor*).

177 222 Partridges (*vivi*) were introduced by the Chileans many years ago and have propagated rapidly. Their eggs are looked for by the natives as eagerly as those of the sea birds. An unsuccessful attempt was also made to acclimatize a Chilean scavenger, the *loica* (*Leistes superciliaris*).

The harmless little lizards (*moko*) may have been stowaways on the Polynesian canoes. They have haunted the imagination of Easter Islanders, who have carved ceremonial objects in their shape.

There are few insects on the island, and their number has certainly increased since European contacts. A sort of cricket is said to have come to the island with the fleet of Von Spee. Flies and cockroaches have become pests.

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Of the three domesticated animals of the Polynesians, only fowls were brought to Easter Island or else they alone survived to the time of European discovery. In 1722, there were neither pigs nor dogs, though Behrens (18, vol. 1, p. 131) tells us that the natives who boarded Roggeveen's ship "seemed to be acquainted with pigs." His statement may be inaccurate, but it is not unlikely that the natives did remember pigs. Pigs are mentioned in Mangarevan traditions and, according to history, the last sow was killed and eaten there in the seventeenth century. When pigs were reintroduced to Easter Island, they were called *oru*, probably an onomatopoeic name. Dogs are termed *paihenga*, and the usual Polynesian name for dog (*kuri*) applies to cats.

The small, long-legged, indigenous fowls seem to have been less numerous before European contact than afterwards. Cook (53, vol. 1, p. 288) and La Pérouse (130, vol. 1, p. 76) stress their scarcity. The great value given to this bird in the social and economic life of the islanders upholds this impression in spite of G. Forster's statement (83, p. 157) to the contrary. Fowls must have multiplied in the second half of the last century for in 1882 they are said to have been extremely numerous over the entire island in a wild or semi-wild state. Geiseler (87, p. 37) estimates that there were 10,000 chickens at the time of his visit.

Today there are no wild fowls, but chickens are abundant in Hanga-roa and the natives are prodigal of eggs. When the ancient culture was functioning, chickens were the usual gifts to people who must be honored; they were raised for feasts and appear as a favorite motif in art. The feathers were used in making circlets, eyeshades, and hats. The economic value that chickens once had for the natives is manifest in the care they took of them. Near the sites of most ancient villages or settlements, hen houses are found. Often they are the only testimony of the former existence of a village. One officer under Gonzalez says that "the islanders breed fowls in little ruins scraped out in the ground and thatched over" (90, p. 122).

The only indigenous mammal was the Polynesian rat which has since been exterminated by rats from the ships. In former days the natives ate rats; Cook (53, vol. 1, p. 288) guesses that they did, and his supposition is borne out by references to the practice in legends. Present natives remember seeing old men eat rats. However, the following tale shows that certain persons were prejudiced against rats and did not consider them a delicacy:

> The girl Kava-komari was brought up and grew. She lived in seclusion in her house, where she daily painted her face red and annointed herself with sugar-cane juice. One year she went to a *koro* (feast). All the men admired her. She lived in the *koro* house. Her father took her a bundle of rats and sweet potatoes to accompany the rats (*inaki*). She opened the bundle and saw the rats. The other girls laughed at her. She asked, "Why do you laugh about the rats?" The other girls answered, "We laugh because you are about to eat the rats." The girl said, "Rats are not bad food. Rats are good. We are like calabashes with the mouth below. There below is something ugly with us. Rats are clean. When you defecate it always falls down."

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411 171 in most Maori specimens. The ridging at the poll on some Easter Island clubs is the usual conventionalized representation of hair, characteristic also of wooden images. Hence the similarity to the transverse grooves on the poll of the Maori *pats* is purely accidental.

FISHING

226 It is impossible to get even an approximate idea of the importance of fishing in pre-missionary times. Fishhooks are found in great abundance in caves, carved fish are common in petroglyphs, and fishing episodes are numerous in folklore. But Eyraud (81, vol. 38, p. 126) states that fish had an [262] insignificant place in the native diet and was considered a great delicacy. At the present time fishermen are few and go out only occasionally. Charli Teao is the only native I know for whom fishing has a special attraction and who derives benefits from this activity. While the *Mercator* was anchored in Hanga-roa Bay he supplied us with tuna which he traded for bread. Deep-sea fishing cannot be maintained on a profitable basis for there are only two boats on the island. Probably the lack of wood for building boats prevented extensive fishing in ancient times.

Numerous causes have contributed to the decline of fishing. The natives have had an ample supply of meat since the introduction of cattle and sheep. [423] Moreover they have free access to only a small part of the coast. If they wish to fish on the north or south coasts, where the coves and low shore are particularly favorable, they must obtain written permission from the Williamson and Balfour Company, and many natives are too shy to ask for it. Easter Island has no protecting coral reef, and in winter months the sea is too rough for the canoes to go far offshore. The fishing season begins at the end of October. The fishing near the island is not good. Ever since Captain Cook's time men have complained of the scarcity of fish.

136 226 [539] Fish are said to be most abundant between the islets of Motu-kaokao and Motu-nui. A stone image called Pou-haka-nononga of the Ahu-anakoiroroa was a landmark used by fishermen to find an area in the sea called Haka-no-nonga where tuna were plentiful. Other places in the deep sea which were traditionally favorable for fishing (*kona-ika-nui*) had proper names. Tuna were caught at points off the coast called Hatehate and Mitiake; the best area for the *ature* fish was at Haka-kainga and for *mahore* fish at Tuaniu. Shore fishing was mostly a feminine occupation, and according to legends was once practiced on a wide scale.

226 Fishermen were called *rava-ika*; expert fishermen were *maori* or *rava-ika-maa* (fishermen-with-knowledge). Canoe fishing was indulged in even by the king (p. 132). Geiseler (87, p. 37) noticed that next to weapons, fishing implements were the most valued artifacts.

1: Metraux E-5 (1934-1935) 1940
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net is 75 feet long and 12 feet 10 inches broad. It is tied at each end to the top of a pole, probably of *hau* wood (*Triumfetta semitriloba*) 6 feet 10 inches long. A strong cord of hemp, probably of European manufacture, extends along the edges of the net. To this cord at the upper edge of the net are fastened 12 floats (*uto*) of *hau* wood 24 inches long. These are attached approximately every 6 feet to the suspension rope by strings tied through holes in the upper ends of the floats. The middle float was called *pito-o-te-kupenga* (the-navel-of-the-net). The lower edge of the net is weighted by 13 stones wrapped in banana tree bark and tied to the edging cord. These sinkers (*kaka*) weigh 196 grams and have an average length of 5 feet. When a shoal of fish was sighted, the two poles were stuck in the sand and the fish were driven toward the net.

Geiseler (87, p. 37) mentions a net 200 feet long but this is probably exaggerated.

The *kupenga viri* (*viri*, to roll) was identical to the *kupenga maito* and was generally used at night.

The *kupenga matiro* had smaller meshes than those of the *kupenga maito* but the principle of the net was the same. It was used to catch *matiro*, a leaping fish.

The *kupenga ihe* was used to catch *ihe* (needle fish). It was the same type as the *kupenga maito* but was larger and had smaller meshes. It was carried to its place by several swimmers.

CASTING NETS

Though casting nets were not enumerated by my informants, they were seen by Thomson (215, p. 460): "Their light casting nets were used with great dexterity as they waded along the beach, and when a shoal of small fish appeared, the net was thrown with the right hand."

TURTLE NETS

For a great many years no turtles (*honu, kepukepu*) have been seen off the shores of Easter Island. The natives explain their disappearance by the passing of the kings (p. 133). Island folklore has many stories about turtles, and numerous petroglyphs represent them. Turtle shells which were worn as ornaments have been found in caves and graves.

My informant says that when turtles were seen, natives jumped into their canoes and went to meet them. They dived near the turtles and drove them into a special net (*kupenga honu*), similar to the *kupenga matiro* but with wider meshes and stronger ropes.

SINKERS

Twelve net sinkers are preserved in the Bishop Museum collection. Four have an artificial perforation, and the others are basalt rocks with a natural hole (fig. 13, *a*).

Of the four stones intentionally perforated, two are nearly flat with holes near one edge like the net weights of Tahiti (fig. 13, *c*). The remaining two belong to a widespread Polynesian type which, in its most characteristic form, is a sphere with a perforated projection at the top. In the same collection, a stone disc with a central hole (B2614) may well have been a sinker.

Three small oval stones weighing about ½ ounce each (fig. 13, *c-d*) are grooved for attachment of a cord. They are labeled in Young's catalog as "*atua mangaro*, fetish stones used by *tulunga* (sorcerers)." The natives identified them as ear pendants to increase their commercial value; they emphatically denied my suggestion that the

1: Metraux E-5 (1934-1935) 1940
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Easter Islanders who wanted to increase their poultry so that they might celebrate a feast (*horo*) had the *ariki-paka* make a charm which contributed to the rapid increase of chickens. When invited to eat chicken meat, the priests received the rump (*huahua*) of the bird.

BIRD CULT

Until the second half of the nineteenth century the annual feast of the bird man (*tangata-manu*), held at Orongo, was extremely important to Easter Islanders. The rites performed were not only connected with the cult of the greatest god of the island, Makemake, but were endowed with special social significance, since ideas of prestige and economic privileges were closely associated with these ceremonies. The ostensible purpose of the ceremony was to obtain the first egg of the *manu-tara* (*Sterna hirundo*, sooty tern), the quest for which was entrusted to servants (*hopu*). The chief whose servant discovered the first egg received the envied title of bird-man (*tangata-manu*). This title, surrounded with tapus, brought to its holder and to members of his lineage certain material advantages and vast moral and religious benefits.

The far-reaching significance of the bird cult is illustrated by the extensive remains at Orongo, one of the most interesting archaeological sites on the island, and by the frequent use of bird and bird-man motifs in all forms of Easter Island art—tablets, wooden images, petroglyphs. The importance of birds in Easter Island culture and the use of birds as the basis for a religious cult are undoubtedly due to the poverty of the island fauna in which birds were the only conspicuous creatures. Not only were they the most interesting living thing next to man, but they contributed thousands of eggs for food.

The bird cult did not die out until about 50 years ago, long after the introduction of Christianity. Almost all recent visitors to Easter Island have studied the bird-man cult. Consequently there is a mass of contradictory material. Routledge, realizing the essential part this cult must have played in the ancient religious and social life, devoted much attention to it, and interviewed the last man who had participated in the ceremonies at Orongo. My information was gained mostly from Tepano, who was well acquainted with some details because his uncle was one of the last bird-men. The information he gave substantiates that gathered by Routledge and adds a few more details.

Orongo

The ceremonies and feasts connected with the bird cult were performed at Orongo, on the slopes of Rano-kao at the southwest point of the island. The village of Orongo lies on the narrow ridge separating the sea from the crater lake. It was temporarily occupied at the time of the yearly feast and deserted the rest of the year.

1: Metraux E-5 (1934-1935) 1940
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Islands of the Bird Cult

361 The picturesque site of Orongo was chosen because of its position opposite
● 136 the islands Motu-nui, Motu-iti, and Motu-kaukau. Two of the islets are
222 almost inaccessible, and it is possible to land on Motu-nui only when the sea is calm. Hundreds of thousands of birds make temporary abode on these solitary rocks, some of them coming for the winter and others for the summer. (See list of birds, p. 18.) The *manu-tara* (sooty tern), whose eggs were the principal objects of the *tangata-manu* feast, arrive from August to October. When I visited the island in November, it was covered with birds nesting on rocks and in the high grasses. Frightened by our arrival, they took flight, swirling around our heads in dense clouds. The natives who had [262] accompanied us gathered in one hour more than a hundred eggs which they ate on the spot.

222 On Motu-nui there are several caves which were occupied by the *hopu*
342 (servants) while they awaited the coming of the *manu-tara* and while they
[357] searched for the first eggs.

On the wall of the largest of these caves, which is about 6.5 meters long by 4 meters wide and 2 meters high, there is an incised image of an *ao* (dance paddle) which
342 is 2.4 meters long. With Dr. Lavachery, I discovered another image which figures a
532 *rei-miro* (breastplate) ending in two cocks' heads.

Besides this large cave, the entrance of which is visible, there are other smaller caves with narrow mouths. On the walls of one cave were some incised figures, among them that of a bird now in the Trocadero Museum. From the mouth of the bird protrudes a flame-like design, composed of many lines. This appears to be a conventional representation of the deafening cries of the birds. Another drawing, also taken from this cave and preserved in the Museum du Cinquantenaire at Brussels, shows a man with long ears.

The most spectacular of these caves is entered by a narrow passage descending at a sharp angle. Routledge (194, p. 275) saw five skeletons there, but I noticed only two; they were untouched and lying on a bed of boulders. Over them hung a big red head, carved in the hard mud of the ceiling, more than 500 mm. long and crossed in the lower part by horizontal lines. It resembled the god with big eyes figured in many petroglyphs on the island. Two small heads were seen in the same cave. A double-headed bird, carved in relief, had been partially destroyed by natives or by visitors hunting for curios. Fortunately another bird in the same cave was reproduced by Routledge (194, pl. 17). Neither Routledge nor anyone in our party was able to get information about the unusual presence of skeletons in this cave, which was probably not intended for a burial vault. The ornaments which covered its walls preclude such a possibility. These carvings are coated with red ochre and stand out from a white background which seemed to me to be natural, although Routledge believed it had been painted.

Another of the caves on the islet was believed by Routledge (194, p. 275) to have been transformed into a sepulchre, but the bones must have been thrown out, since I found none there. A statue presented to the British Museum by Routledge is said to [423] have been removed from one of these caves and to have been called Titahanga-o-te-henua. It is purported to have marked the boundary between Tuu and Hotu-iti.

Mataveri

796 The third place closely associated with the ceremonies of the bird cult was Mataveri on the northern slope of Rano-kao, where now stands the house

6: Anonymous T-5 (1770)1908
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The island extends to about 50 miles in circumference; but no harbour capable of affording shelter to a single vessel of moderate burthen was met with. The whole of the shore-line is beset with reefs, cliffs, and rough ground, without containing any spot fit to beach a boat at. On penetrating inland in a few places they met with many natives, with whom they held intercourse, and they observed in them the same manners, customs, and ceremonies as in those of this bay; experiencing among them the same disposition to theft. They saw no kind of wild nor domestic animal, excepting hens and some rats. The fields are uncultivated save some small plots of ground, in which they sow beds of *yuca*, yams, sweet potatoes, and several plantations of plantains and sugar-cane: but all very tasteless, as if from want of cultivation. They did not find any metal, nor any ornaments of that kind in the natives' habitations. All this account tallies with the observations we have gathered in this bay, on whose slopes, and on those throughout the island, not a single tree is to be found capable of furnishing a plank so much as six inches in width; but there are plenty of shrubs or brush-wood of a sort little more than an *estada*[1] in height, which offer little obstruction to one in passing as they are not dense and have no prickles. Its trees are very similar to mimosas and tamarinds. Of fruit-bearing trees I have seen only some very small figs, but so different from ours that they are recognisable as such only by the scent of the leaf, and the white juice which exudes from them. It is certain that they bear fruit, because the natives were eating some dry figs on board, which we gave them from those of Mendoza, and they called them *gecoy*. The island is destitute of every kind of bird: not a single bird has been

[1] An *estadal* or *estada* is equivalent to four *varas* of about 33 inches each, *i.e.* 11 feet.

6: Anonymous T-5 (1770)1908
OY2 Easter Islanders OY2

136 seen in it. Even the marine species do not settle on its shores nor fly within sight of it: the same is the case with regard to beetles, insects, &c.

342 Most of the natives of the island dwell in underground caves, or in the hollow of some rock, the entrances to which are so narrow and inconvenient that I have seen some of them introduce themselves in the opposite manner to what is natural, beginning by projecting their feet and the head last. The more polished or powerful persons, whether in [554] virtue of their age or of authority, are held in esteem. These inhabit small huts covered with reeds [*totora*], and constructed in the form of a large tunnel, in whose bilge or bellying portion [*vientre ò bariga*] is the entrance, after the manner of a trap-door for cats' egress, so narrow that only one man can pass in or out at a time, and that with effort. Others (whom I believe to be their ministers) occupy dwellings close to the statues; these are built of earth below, but with an entrance way or porch of very roughly hewn and clumsily set up stones, after the fashion of a wall, with a certain number of steps for passing from one platform or surface of ground to another on different levels.

324 It is known that they work the stone, on which may be seen several different figures, squares, oblongs, arcs [*rumbos*], triangles, and trapezia, by means of another stone of harder substance than the mass, and the same method is followed, I believe, in fashioning the statues.

648 On the afternoon of this day during a rain squall with little wind from the S.W. our cable parted, having chafed completely through against a coral rock, fragments of which came up embedded among the strands of the two broken ends. We spent the evening in making ready for the succeeding day, on which we were to formally disembark and take possession of the island, and to erect upon it three crosses which had been got ready for the purpose on board the Commodore.

7: Anonymous T-5 (1770)1908
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the other, and we found 26 fathoms there, rocky bottom. The middle one resembles a high church tower; we attempted to gain a footing on it, but found it little accessible. We passed on to the outer one, where we succeeded in landing, and on which we found two large masses of seaweed, many black flints, some sea urchins and small crabs, eggs of sea-gulls and their fledgelings. On these rocks alone did we see any sea-gulls, and excepting fowls we saw no other kind of birds on either of the other islets, nor on the island of San Carlos, either small or large, wild or domesticated. The islanders breed these fowls in little runs scraped out in the ground and thatched over.

Having made an investigation of these islets we pursued our course along the coast, at times under sail, at other times under oars; and, the wind holding contrary, at three o'clock in the afternoon we stood in towards a smooth patch of foreshore about a league away to the N.E. of Cape San Francisco. Here we decided to bring up for the night in a small bay which appeared to us to be a suitable place for the purpose, and to which we gave the appellation of the Cave, because there was one adjoining the beach at this place with furrows in it of various tints, from which the natives gave us to understand by signs they obtained the pigments with which they paint themselves. This bay is only suitable for launches. We all went ashore to eat our dinner, which we carried with us for that purpose, and some hundred or so natives came to look on, offering us fruits and hens. The officer, Don Cayetano de Lángara, issued orders to our people that no one, under pain of a severe flogging, should accept any article from the islanders without giving some equivalent in return, or something of greater value than that which they received, since it was known there was a disposition to exchange articles; and such in fact was put into practice.

8: Behrens T-5 (1721-1722) 1908
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500 live fowls, which were like those of the Vierländen, this time without any boiled or roast ones, together with many roots, some red, some white, a good lot of potatoes which tasted almost like bread, and which are used by these people in the same way; and some hundreds of sugar-canes, great quantities of *pisang*[1], being Indian figs as large as a cucumber a span in length and of proportionate thickness, with a green rind. When one peels this off [the pulp] tastes like figs, or as sweet as honey: there are sometimes as many as a hundred on a single bunch. The leaf is from two to three feet broad and from six to eight feet in length. It is with these that our first parents should have covered themselves in Paradise after their unfortunate Fall, because it is almost the largest and strongest leaf which one meets with in Morning and Evening lands.

No animals were met with, as far as we penetrated on this occasion, except sundry species of birds; but there may be many other animals farther in the interior of the country, as the natives seemed acquainted with pigs when they saw some on board our ships.

The natives prepare their meals in pots made of clay or earth. Each household appeared to us to have its own.

The houses were from forty to sixty feet [*schuh*] long, six to eight feet [*schuh*] in width, and of similar height, set up on wooden stakes, daubed over with luting and covered in with palm leaves. As regards their subsistence it appears that it must be procured by tillage of the soil, as we saw it everywhere planted and bearing crops. Moreover the fields or lands were all measured off with a cord, and very neatly cultivated. At the time of our visit all their crops were maturing: the fields and trees were in full bearing, and I feel sure that if we had explored this country right through many good things would have been met with, since we were there in just the best season of the year.

No remarkable furniture was found inside their houses, except some red and white coverlets [*decken*] which they often use as apparel, and also for sleeping under. These coverlets felt like silk, to the touch, so that one could almost conclude they had looms by means of which they made them themselves.

These natives were universally blithe and merry, well-built, strong in limb, not exactly slender, yet nimble on their feet; friendly and pleasant in manner, but submissive withal, and also very timid. Most of them, when bringing any object such as

[1] *Pisang* is the Malayan generic term for the banana.

9: Forster T-5 (1774) 1777
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1774. MARCH. pillar which appeared above ground. We did not obſerve that the natives paid any worſhip to theſe pillars, yet they ſeemed to hold them in ſome kind of veneration, as they ſometimes expreſſed a diſlike when we walked over the paved area or pedeſtals, or examined the ſtones of which it conſiſted.

A few of the natives accompanied us farther on into the country, where we had ſeen ſome buſhes at a diſtance, which we hoped would afford us ſomething new. Our road was intolerably rugged, over heaps of volcanic ſtones, which rolled away under our feet, and againſt which we continually hurt ourſelves. The natives, who were accuſtomed to this deſolate ground, ſkipped nimbly from ſtone to ſtone without the leaſt difficulty. In our way we ſaw ſeveral black rats running about, which it ſeems are common to every iſland in the South Sea. Being arrived at the ſhrubbery which we had in view, we found it was nothing but a ſmall plantation of the paper mulberry, of which here, as well as at Taheitee, they make their cloth. Its ſtems were from two to four feet high, and planted in rows, among very large rocks, where the rains had waſhed a little ſoil together. In the neighbourhood of theſe we ſaw ſome buſhes of the *hibiſcus populneus*, Linn. which is common alſo in the Society Iſles, where it is one of the numerous plants made uſe of to dye yellow; and likewiſe a *mimoſa*, which is the only ſhrub that affords the natives ſticks for their

10: Cooke D-5 (1886) 1899
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men into their cave, the officers into their tent. Previously to doing so, however, we took precaution to stuff our ears with paper, in order to exclude the "snapping beetle," one of the *Elateridæ*, credited by the natives with a predilection for that organ, and myriads of which had been assailing us.

Our bed was composed of the moku—native grass—over which we placed our rubber sheets. At 2 o'clock in the morning we were awakened by a heavy rain storm, against which our flimsy patchwork tent proved but poor protection, the water either pouring through or running under our bed of litter.

On Wednesday, December 22, after a hearty breakfast, finding that we were none the worse for the previous night's experience, we struck camp, the pack animals were loaded, and at an early hour we were under way again. Our course this day continued along the coast line to the northward and around North Cape, skirting the base of Rana Hana Kana. The shore all along this part of the island is bold, rocky, precipitous, the black frowning basalt cliffs rising in many places to the height of hundreds of feet, truly an "iron-bound" coast, upon which the seas break with terrific fury, dashing the spray high in the air. The powerful solvent action of sea water upon even the hardest volcanic rock may here be seen exemplified in the fantastic shapes wrought by the waves on every side, the arches cut through, the innumerable caves excavated in the face of the cliffs, the pinnacles, towers, basins, etc., visible at every step. Many of the caverns were explored, and human and other bones found in some of them. The character of the surface land was about the same as on the preceding day, and the tramp over rocks and stones was a weary and trying one.

During the afternoon a detail of men was again sent ahead to locate the camp for the night, near a fresh-water spring known to the natives, and which the remainder of the party reached toward sunset. This, which we named "Camp Day" in honor of our commanding officer, was situated in the district of Vai-mnitai (good water), near Motukan Point, about 3 miles distant from our camp of the night before, but fully three times as many by the route we had taken. One of the natives was sent back to the ship, with a note, for additional supply of stores. Two caves were occupied at this camp, one by the officers, the other being allotted to the men.

Despite the promising name of the district, the water again proved bad, being brackish. A couple of sheep had been captured and dressed, and from these and canned food, garnished with taro, sweet potatoes, and bananas, baked by the natives in their inimitable way, and washed down with copious drafts of tea, an excellent meal was made. Our cave proved a damp, ill-smelling place, and visions of pneumonia, rheumatism, and other resultant affections dominated our dreams, rendering sleep fickle and unrefreshing.

At 7.30 on the morning of Thursday, December 23, we were again

10: Cooke D-5 (1886) 1899
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under way and continued our route along the cliffs on the north shore of the island. At platform No. 29 a pit was excavated in which a collection of human skulls, without any other portion of the remains, was found. Our track this day led us to Anakena Bay, according to tradition the original landing place of King Hotu-Metua, his queen, and followers, from whom the present inhabitants claim their descent. We found at the head of the bay a fine, extensive sand beach, the first we had fallen in with, forming a good landing place for small boats. The breakers and still water in the vicinity were seen swarming with fish of several varieties, of which the natives gave us their names. The sand beaches were thickly strewn with the "Portuguese man-of-war" (*Physalia utriculus*), called by the natives *Papaki*, and which, to the writer's great surprise, they informed him was eaten by them as food. Adherent to the rocks was found the singular, cuirass-covered little creature, called by the natives *hemoma*, one of the *Chitons*, perhaps the *magnificus*, which is also used by them as an article of diet. Thus, also, a small univalve, called by them *ngingongi*, large collections of the shells of which were found stowed away in the walls of the stone huts at the edge of the crater, on Rana Kao, where also was found the remains of the *Chiton*. The sea urchin, *Echinus* (*esculentus?*), in Rapa Nui-*hetuki*, and a diminutive snail, which they call *pipi*, were found at Anakena. All the above form a part of their dietary, and they seemed to speak of and regard them as tidbits. 123 136 262

Sometime was passed at Anakena, exploring its vicinity where, there is every reason to suppose, an extensive town existed, for which the nature of the surface, ascending gradually from the water's edge to high land on either side, with a hill rising between and running back into the interior, forms a most admirable site. The remains of former habitations were found in various directions. At some distance back from the sea on rising ground, in an isolated position, far removed from any platform or image, was found the largest tufa crown we had yet seen and which subsequent investigation proved the largest on the island. It was slightly oval in shape, lay on its side, was buried in the earth to a depth of about 2 feet, and by actual measurement was 27 feet 9 inches in circumference, 9 feet 9 inches in diameter across the long and 9 feet 2 inches across the short oval, and 9 feet high. 172 532

Beyond Anakena Bay the walking became especially difficult and laborious at one point, near Ovahe Bay, it was necessary to scale the face of a cliff, at about midway of its height, on a narrow ledge of rock. 123

Our camp, named "Whitney," for the honorable Secretary of the Navy, was located for this night near Hanganone Bay, about 4 miles from our starting point of the morning, and it was nearly dark when we entered its welcome precincts. Supplies from the ship, brought by the boat, which had been nearly all day reaching Anakena, were carried thence overland and arrived in camp during the evening.

Near our present camping ground we found the best water of any 312

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tireless, anxious to please, and ready at all times, day or night, to do our bidding. Two of them, Luka and Huki, were especially useful to us. The latter was the more intelligent of the two, and was remarkably well informed regarding everything pertaining to the island. He knew the name of every point, headland, bay, etc., and his replies to our questions were given without hesitancy and so correctly, as we found by testing him, that he frequently surprised us. The writer obtained much information from him, and might have gained much more, regarding the native plants, insects, shells, etc., but unfortunately our interpreter, who had been but a short time on the island, was practically useless as a medium between us, and to understand each other's meaning was therefore most difficult. Owing to this fact, the want of facilities and conveniences for collecting and preserving specimens, and the absence of works of reference, but little could be accomplished in the particulars above mentioned.

A source of great annoyance to us during our trip was the hordes of flies which kept us company on the march, and then whenever we approached camp in the evening were greeted and cordially welcomed by other hordes which had been in previous possession of the locality. Many of the islands of the South Pacific are noted for the swarms of flies which infest them, one Bairon, having been named by the navigator Schouten, 1616, Vliegen Islands by reason of the myriads which assailed and finally drove him to sea.

Another, and in some respects even worse plague, was the fleas, which had their origin in the numerous dogs kept on the island.

One more source of discomfort, in connection with our stay at the hospitable residence of Mr. Salmon, was the host of cockroaches which swarmed every part of the premises, measuring 2 or more inches in length, with antennæ to correspond, and furnished with wings of a beautiful glistening brown.

TOPOGRAPHY.

From the most reliable information obtainable it appears that the ancient name of the island was *Te Pito te henua*. Referring to the vocabulary it will be seen that the word *Pito*, in Rapa Nui signifies *navel*, and *henua*, the *uterus*. What association of ideas could have prompted these appellations it is, of course, difficult to imagine at the present day. The following speculations, which have occurred to the writer, are given for what they may be worth. The island is distinctly of volcanic origin, and on nearly all the hills and mountains the craters are clearly traceable, most markedly and startlingly so in the case of Rana Kao, at the southwest end. As will be seen, the craters of both volcanoes (all on the island are now extinct) are of great depth, with lakes of water at their bottoms. In the cases of the other volcanoes the craters are much more shallow, symmetrical, more evenly rounded, overgrown with grass, present a very striking and beautiful appear-

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The food consisted of the usual tropical products such as
241 potatoes, bananas, sugar-cane, and taro. Animal diet formed a
262 very small part of it, rats being the only form of mammal; but
[136] chickens played an important rôle in native life, and the remains
[231 of the dwellings made for them are much more imposing than
343] those for human beings. They are solid cairns, in the centre of which was a chamber, running the greater part of their length; it was entered from outside by two or more narrow tunnels, down which the chickens could pass. They were placed here at night for the sake of safety, as it was impossible to remove the stones
[226 in the dark without making a noise (fig. 86). Fish are not very
438] plentiful, as there is no barrier reef, but they also were an article of diet, and were bartered by those on the coast for the vegetable products obtained by those further inland. Fish hooks made of
226 stone were formerly used, and a legend tells of a man who had marvellous success because he used one made of human bone. The heroes of the tales are also spoken of as fishing with nets. There are in various places on the coast round towers, built of
[343] stone, which are said to have been look-out towers whence watchers on land communicated the whereabouts of the fish to those at sea; these contained a small chamber below which was used as a sleeping apartment (fig. 87). Turtles appear on the carvings on the rock, and are alluded to in legend, and turtle-shell ornaments were worn; but the water is too cold for them ever to have been common, and Anakena is almost the only sandy bay where they could have come on shore.

The sole form of dress was the cloth made from the paper
291 mulberry, and known throughout the South Seas as tapa; it
[287] was used for loin-cloths and wraps, which the Spaniards describe as fastening over one shoulder. Head-gear was a very important point, as witnessed by the way the islanders always stole the caps of the various European sailors. The natives had various forms of crowns made of feathers, some of them reserved for special occasions. Cherished feathers, particularly those of white cocks, were brought out of gourds, where they had been carefully kept, to manufacture specimens for the Expedition. The crowns are generally made to form a shade over the eyes, like the head-dresses of the images. Naturally, every effort was made to find the prototype of the image hats. No one recollected ever seeing anything precisely like it, but among the pictures drawn for us of various head-decorations was a cylindrical hat

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managed, however, between us to get there three times in all. Once, when I was there without S., there was an anxious moment on re-embarking. No one quite knew what happened. Some of the crew said that the gunwale of the boat, as she rose on a wave, caught under an overhanging shelf of rock, others were of the opinion that the sudden weight of the last man, who at that moment leapt into the boat, upset her balance; anyway, this tale was very nearly never written. Once landed on the island, the surface is comparatively level and presents no difficulties; it is about five acres in extent, the greater part is covered with grass, and in every niche and cranny of the rock are sea-birds' nests. By a large bribe of tobacco one of the most active old men was induced to accompany us, and to point out the sites of interest. Later, we followed up the story at Raraku, and so little by little at many times, in divers places, and from various people was gathered the story of the bird cult which follows.

Not many sea-birds frequent this part of the Pacific, but on Motu Nui some seven species find an abiding-place. Some stay for the whole year, some come for the winter, and yet others for the summer. Among the last is a kind known to the natives as manu-tara[1]; it arrives in September, the spring of the southern hemisphere. The great object of life in Easter was to be the first to obtain one of the newly laid eggs of this bird. It was too solemn a matter for there to be any general scramble. Only those who belonged to the clan in the ascendancy for the time being could enter on the quest. Sometimes one group would keep it in their hands for years, or they might pass it on to a friendly clan. This selection gave rise, as might be expected, to burnings of hearts; the matter might be, and probably often was, settled by war. One year the Marama were inspired with jealousy because the Miru had chosen the Ngaure as their successors, and burnt down the house of Ngaara. This was, perhaps, the beginning of the fray when the old Ariki was carried off captive.

The fortunate clan, or clans, for sometimes several combined, left nothing to chance; in fact, as soon as one year's egg had been found, the incoming party made sure of their right of way by taking up their abode at the foot of Rano Kao—namely, at

[1] Booty Tern.